

## The Health Science Librarian: A Member of the Health Care Team Responsive to Emerging Trends

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AGNES A. ROACH

THE TRENDS IN HEALTH SCIENCE libraries mirror many of the trends in the field of health care. Certain organizations, such as the Medical Library Association (MLA) and the National Library of Medicine (NLM), have also pursued programs which affect the kinds of services being offered and their delivery. Not all trends discussed in this paper<sup>1</sup> are unique to health science libraries, but one of the most innovative new methods of information delivery is a clever response to the special needs of health care workers. All forces affect the current as well as future patterns of health science library service, and may also influence other types of libraries.

In the mid-1960s, the health care team emerged as a new concept in the practice of medicine. All those who contributed to the care of the patient were members of the health care team, whose efforts were coordinated by the team leader (the physician); however, each member provides specialized knowledge and skills.

*Index Medicus* first introduced the subject heading "patient care team" in 1968. The inclusion of the pharmacist as a member of the team was already accepted by that time.<sup>2</sup> By 1971 librarians had also joined the health care team. Dr. Gertrude Lamb began a clinical librarian program at the University of Missouri-Kansas City Medical School aided by a grant from the National Library of Medicine.<sup>3</sup> She was to move later to Hartford Hospital (Connecticut) where she continued her work estab-

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Agnes A. Roach is Assistant Director of Reader Services, Chicago College of Osteopathic Medicine.

lishing the concept of the clinical librarian.<sup>4</sup> Except for brief mentions of this new concept,<sup>5</sup> clinical librarianship did not come to the attention of most medical librarians until the annual meeting of MLA in 1973. The new concept was enthusiastically received and has been adapted in many ways since.<sup>6</sup>

A clinical librarian becomes a member of a patient care team, attends educational conferences, patient rounds, grand rounds, etc. in order to identify needs for information, to find that information, and to deliver it within a very short time (ranging from minutes to hours). The program enhances patient care by providing current literature quickly. It also enhances the educational process for all team members by keeping them aware of new techniques and therapies. Clinical librarians spend some time instructing team members in the use of the library tools and facilities. Since health care personnel are very busy and often confined to certain locations (such as the operating room, hospital wards or clinics), this program makes resources somewhat removed from them easily accessible. Often questions not posed immediately are never asked, or if they are only mentioned in passing, nothing is done about them. By being present, the clinical librarian can anticipate questions as well as answer those that might otherwise never have been asked.

Although it is possible to handle a clinical librarian program without computer search facilities (as this author's experiences have indicated), it is much quicker and easier to have access to Medline, a computerized on-line system with more than 600,000 references to biomedical journal articles and selected monographs.<sup>7</sup> (Since Medline was introduced in 1971, access to its facilities has been extended. By 1977 more than 600 institutions were part of this network.<sup>8</sup>) Another program for delivering information related to patient care is LATCH (literature attached to charts). Physicians order searches very much as they would any test or treatment for the patient. The result is a few articles relevant to the patient's problem attached directly to his or her chart.<sup>9</sup>

In both the fields of medical care and information science, technology is playing an increasingly large role. This technology often has cost implications, but may mean greater accuracy. Both cost containment and the use of technology are forces affecting the role of the health science librarian.

In 1970 Michael Crichton published *Five Patients*,<sup>10</sup> which gave a good picture of the scope of activities and problems of a large, metropolitan teaching hospital. It also depicted some of the human elements in the practice of medicine. He covered such points as emergency care,

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new technology and high costs, as well as the coordination of various health care personnel in acting as a team to handle the problems at hand. His book presents the context within which the health science librarian acts as a member of the health care team, all of whom are subject to the same pressures.

One of the biggest effects on library service of trends in the health care field could come with cost containment for hospitals. "Changes in the mix of resources within hospitals and in the frequency of their use are the first-order effects of cost containment"; other effects, such as those on research and development of new technology, are second-order consequences.<sup>11</sup> Responses to the need to control costs can already be seen in health care libraries where fees for on-line searches, interlibrary loans and photocopying are being newly implemented.

The concern with costs is also illustrated in articles published in the medical library literature. During 1976-78, there were four articles on budget considerations in *Bulletin of the Medical Library Association*, while *MLA News* had twenty-nine different items on costs, fees, grants and other budget-related subjects in a 19-month period (July 1977-January 1979). Many services developed in health science libraries in the past nine years are labor-intensive, especially those involving the librarian as an active member of the health care team. This intensive use of highly skilled personnel is typical of hospital care and is also a factor in increasing costs. Costs for materials (books, journals and audiovisuals) are rising along with the costs of services (personnel, computer services, etc.). While costs are rising, the need and demand for more services in health science libraries are also increasing as programs like clinical librarianship and LATCH create attractive new services. Cost containment by hospitals will have an effect in both hospital libraries and medical school libraries.

Assuring access to care, as well as quality and geographical distribution of care, are additional problems facing the health care field. Federal funding to increase the number of medical schools and students resulted in the building of several new schools which accepted their first students in the late 1960s.

The problem of continuing education for physicians and other health care personnel has resulted in the development of certification and recertification programs for each specialty. This requires continuing education programs and puts a demand on health science libraries for more materials as well as new formats such as audiovisuals (another aspect of developing technology). It also increases the need for library services in

rural areas. The new schools helped fill the geographical gap, that is, they were located in areas that did not previously have medical schools. Since physicians often stay in the area where they receive their training, it was expected that the availability of a medical school would draw students (later to become doctors) to an area and keep them there. The expansion of medical schools resulted in new medical school libraries and greatly increased the total health science library resources of the country. More resources and more medical librarians were needed to staff and furnish these new schools. There was a noticeable increase in the number of library schools offering courses on biomedical librarianship, and in the number of courses offered.<sup>12</sup>

Concurrently, most medical schools also offered residency programs for the new doctors to provide training in specialty areas. Because surveys of physician manpower had identified shortages of physicians in primary care specialties, government funds were made available to set up these types of training programs, particularly in the specialty of family practice. A recent study done by the Graduate Medical Education National Advisory Committee found that the number of residents in primary care specialties increased 174 percent from 1960 to 1976. By 1990 primary care physicians are expected to increase 75 percent over the 1974 figure, representing 40 percent of all physicians.<sup>13</sup> This increase in the number of physicians alone (without the growing numbers of other health professionals) will continue to affect the demand for medical library services, both for information related to patient care and for continuing education purposes.

To help small hospital libraries in remote, rural areas develop their libraries and services, the role of the extension or circuit-rider librarian was conceived. This position originated at the Cleveland Health Sciences Library: one of its librarians visits a group of hospitals (for a fee) to provide the library services needed.<sup>14</sup> In a similar project, state coordinators travel to various small hospital libraries to provide advice, assistance and information, and serve as a communication link to the Midwest Health Science Library Network.<sup>15</sup>

As certification/recertification became established for health care personnel, steps were taken by MLA to strengthen its certification code. Through the work of its Director of Education (Dr. Julie A. Virgo during 1971-77, and then Dr. Robert A. Berk, 1977-79), new procedures to certify medical librarians were developed. Over the 4-year period 1975-78, the efforts of several committees were coordinated in developing a new certification examination. This exam was given twice in 1978 and from 1979

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on will be administered once each year. Although most health science librarians were already certified under the previous MLA code, all are faced with recertification.

The first MLA continuing education (CE) courses, courses 1-5, were offered in 1966 at the MLA annual meeting in Boston.<sup>16</sup> The number of the CE courses developed has increased rapidly, from twenty in 1974<sup>17</sup> to fifty-seven in 1979. Ten new courses were presented at the annual meeting in June 1979,<sup>18</sup> while nine new courses had been presented at the previous year's meeting in Chicago.<sup>19</sup> The MLA CE courses have served as an example for other library associations. They can be offered anywhere. Although they are usually presented in the United States or Canada, there are plans to offer certain MLA CE courses at the next two International Federation of Library Associations meetings in 1979 and 1980. The MLA Continuing Education Committee is exploring alternate means to make CE courses generally available. In 1979, as a pilot project, one CE course was given via Telenet under the auspices of the University of Wisconsin.<sup>20</sup>

In addition to certification for librarians, hospital libraries are also included in the accreditation program for each hospital. The Joint Commission for Accreditation of Hospitals (JCAH) develops and publishes standards for use by the site visit teams in evaluating each institution. The JCAH Standards for Hospital Libraries were revised and published in 1978. Eloise Foster (American Hospital Association Library) reviewed the new standards and noted: "elements of management are obvious: organizing, staffing, planning, coordinating, reporting, and budgeting."<sup>21</sup>

The emphasis on management techniques for health science librarians is also obvious in other areas. Fourteen (20.8 percent) of the CE courses offered by MLA in June 1978 covered administrative topics.<sup>22</sup> The next largest subject group of CE courses was reference with twelve (or 17.9 percent). Three of the nine new courses to be offered in 1979 are on management topics. An analysis of articles published in the *Bulletin of the Medical Library Association* during 1966-75 found that 2.2 percent covered library management.<sup>23</sup> This author's analysis of articles published during 1976-78 found 7.2 percent on management, an increase of more than 300 percent over the number offered in previous years.

The National Library of Medicine, as part of the Department of Health, Education and Welfare, is a true national library in the field of medical sciences. Its activities have had great effects on medical libraries and have shaped many services offered to health care professionals. All health science libraries in a given area are coordinated by a regional

medical library funded by NLM. Services such as interlibrary loans within regional networks are subsidized in part by funds from NLM. NLM gave impetus to the growth of area consortia at the local level. Each region also has its own programs for upgrading medical library services, some of which have served as prototypes for other regions.

The Midwest Health Science Library Network (MHSLN, which is composed of medical libraries in Illinois, Indiana, Iowa, Minnesota, North Dakota and Wisconsin) has been conducting some very interesting projects, the results of which could have great influence on library services in all regions. Using a model that emphasizes an orderly and logical progression from one step of planning to the next, it has established committees to make proposals which can be implemented to meet the information needs of health care personnel.<sup>24</sup> Needs were discovered via survey techniques and outlined in an MHSLN report in 1977. Goals were developed which include: (1) increasing use (by defining high-quality services, communicating a sense of service, developing feedback mechanisms, etc.); (2) understanding needs (using interviewing techniques and periodic needs assessments, and training librarians to teach users); and (3) identifying gaps in the collection (by surveys, inventories and collection development planning). Seven committees are working on separate aspects of these goals. Committee projects include a directory of alternate information sources, a proposal to enhance communication, a quality assurance process, a booklet and media package on a sense of service, a regional guide to libraries, and a reference-interview educational package. Most of these should be easily transferable for use in other regions and types of libraries, or for use as prototypes.

One area in which NLM has been a major force is that of technology development. There are now fifteen separate data bases available on-line for information retrieval. These include Medline, four toxicology data bases, two cancer data bases, Catline (Catalog on-line), Serline (Serials on-line), Avline (Audiovisual on-line), Histline (History of medicine on-line), Bioethicsline, and Epilepsyline.<sup>25</sup> Obviously NLM is fulfilling a role for the efficient management of technical services (Serline, Catline), as well as providing many data bases for clinicians, educators and researchers. In addition to offering these MEDLARS data bases in this country, NLM has eleven international partners (Australia, Canada, France, Germany, Iran, Japan, Mexico, South Africa, Sweden, United Kingdom and the Pan-American Health Organization) with which it cooperates. Not all centers can search all data bases, but they do consti-

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tute an international network recognizing the value of biomedical information for medical research, education and health improvement.<sup>26</sup>

The Lister Hill Center is the division of NLM which develops new communications systems. Using satellite-based programs, it has provided video communication for biomedical researchers in Alaska and the Pacific Northwest. The Lister Hill Center is currently experimenting with a national broad-band interactive communications network for health education programs to promote dissemination of information, increased access to continuing education programs, and the sharing of faculty and curriculum among health professionals. A prototype, computerized information-transfer system using the disease "viral hepatitis" as the initial test model has been constructed. This data bank contains "substantive answers to questions posed by practitioners (rather than bibliographic citations)" to give immediate data as well as literature citations for further study.<sup>27</sup> This system could make health care information (not just citations) immediately available anywhere there was a terminal, thus substantially decreasing the importance of geographic location. The Lister Hill Center is also working to develop a minicomputer system that would integrate all library functions in one file; a computer terminal to integrate currently incompatible computer-assisted instruction systems; and a videodisk that could extend large bibliographic data bases to include texts, color images and audiovisual sequences.<sup>28</sup>

The National Library of Medicine also supports the development and utilization of quality learning materials through the National Medical Audiovisual Center (a division of NLM). It holds workshops periodically to train faculty to use audiovisuals, which would imply an increased demand for these materials in health science libraries. This interest in media by health science faculty is shared by health science librarians. In 1973 the MLA board of directors approved a petition to form the new Health Sciences Audiovisual Section, with Dorothy Spencer as the first chairperson.<sup>29</sup> Since 1974 nine articles on audiovisuals have appeared in the *Bulletin of the Medical Library Association*. The *MLA News* has a regular monthly column entitled "Media Notes."

As the health science librarian has become increasingly involved in the work of the health care team, he/she has become interested in providing information to patients about personal care. There is a growing trend in hospital and medical school libraries to develop collections of information on health care for patients and to disseminate this information via health care workers and through cooperation with local public

libraries. The concept of health care as a right has come to be commonly held at the same time that consumerism has become a popular national trend. People are indicating some tendencies to care for themselves and to maintain the quality of their health through physical fitness and proper nutrition. All of these trends appear to be sources of influence on the emerging trend for providing patient information. During 1977-78 eight articles on patient information have appeared in the *Bulletin of the Medical Library Association*, while none appeared during 1974-76. From July 1977 to January 1979 the *MLA News* included six items on patient education, of which two described MLA regional group programs on this topic. The two emerging trends of patient education and clinical librarianship are commonly combined, as in the program at McMaster University originated by Joanne G. Marshall.<sup>30</sup> The hospital librarian is in the unique position of combining professional training in providing information with that of acquiring it. As Cheryl Harris noted, the hospital library: "exists to provide information in support of the hospital's major functions, which are patient care, education, and research. Involvement in programs of planned patient education demonstrates the library's vital role in all three functions."<sup>31</sup>

As health science librarians continue to function as part of the health care team, the skills and techniques needed to continue to respond successfully to information needs are becoming increasingly sophisticated. Rapid changes in technology (computers, microforms and communication) coupled with budget constraints are forces combining to require more and better administrative skills. The health science librarian must deal with people, both library staff and other institutional members. Extension and clinical librarians also need good interpersonal skills. Today's health science librarian must be adaptable — ready and willing to accept innovations and to implement them. F. Wilfrid Lancaster has expressed concern generally about the future of libraries in the new electronic age.<sup>32</sup> It seems that health science librarians are accepting the new technological challenges, are responding with innovative personal delivery systems (clinical librarianship) and are anticipating and planning for the future (as the MHSLN planning process evolves). With the great expansion of personnel and educational facilities in the health care field, health science librarians can enjoy being vital, contributing members of the health care team, as well as cooperating and sharing resources with other health care teams through the biomedical communications network.



## **References**

1. The author wishes to thank the following people for information (both verbal and written) which they provided: Paul Olson, Midwest Health Science Library Network; Eloise Foster and Linda Knowles, American Hospital Association; Frances Johnson, Harold Wooster, Harold Schoolman, Richard West and Mary Corning, National Library of Medicine; Karol Weigelt, Medical Library Association; Glen Brudwig, University of Minnesota Biomedical Library; and Kathryn Schlegelmilch, Chicago College of Osteopathic Medicine.
2. Picoro, John J., et al. "A Pharmacist on Hospital Ward Rounds," *Journal of the American Pharmaceutical Association* NS7:630-33, Dec. 1967.
3. Algermissen, Virginia. "Biomedical Librarians in a Patient Care Setting at the University of Missouri-Kansas City School of Medicine," *Bulletin of the Medical Library Association* 62:354-58, Oct. 1974.
4. Lamb, Gertrude, et al. "And Now, 'Clinical Librarians' on Rounds," *Hartford Hospital Bulletin* 30:77-86, June 1975.
5. "Health Science Librarians on Ward Duty," *Library Journal* 99:1351, May 15, 1974; "Teamwork Pays Off," *American Libraries* 5:353-54, July-Aug. 1974; and "And Now, 'Clinical Librarians' on Rounds," *Journal of the American Medical Association* 230:521, Oct. 28, 1974.
6. Roach, Agnes A., and Addington, Whitney W. "The Effects of an Information Specialist on Patient Care and Medical Education," *Journal of Medical Education* 50:176-80, Feb. 1975; Schnall, Janet G., and Wilson, Joan W. "Evaluation of a Clinical Medical Librarianship Program at a University Health Sciences Library," *Bulletin of the Medical Library Association* 64:278-83, July 1976; Farmer, Jean. "Does the Librarian Have a Place in the Clinical Team?" In *The Library Association Centenary Conference: Proceedings*. London, Library Association, 1977, pp. 86-88; Marshall, Joanne G., and Hamilton, John D. "The Clinical Librarian and the Patient: Report of a Project at McMaster University Medical Centre," *Bulletin of the Medical Library Association* 66:420-25, Oct. 1978; and Claman, Gretchen G. "Clinical Medical Librarians: What They Do and Why," *Bulletin of the Medical Library Association* 66:454-56, Oct. 1978.
7. Department of Health, Education and Welfare. Public Health Service, National Institutes of Health. "MEDLARS, the Computerized Literature Retrieval Service of the National Library of Medicine" (DHEW No. NIH 79-1286). Bethesda, Md., U.S. DHEW, Jan. 1979. (revised)
8. Palmer, Joseph W. "Changes in Medical Librarianship: A Content Analysis of Job Advertisements in the *MLA News*, 1961-1977," *Bulletin of the Medical Library Association* 66:464-66, Oct. 1978.
9. Sowell, Steven L. "LATCH at the Washington Hospital Center, 1967-1975," *Bulletin of the Medical Library Association* 66:218-22, April 1978.
10. Crichton, Michael. *Five Patients: The Hospital Explained*. New York, Alfred A. Knopf, 1970.
11. Warner, Kenneth E. "Likely Effects of Hospital Cost Containment on the Development and Use of Medical Technology," *Milbank Memorial Fund Quarterly: Health and Society* 56:196, Spring 1978.
12. Information provided by Karol Weigelt, MLA Division of Education, based on MLA surveys conducted in 1978 and 1979.
13. "Future Health Manpower Needs Projected in GMENAC Report," *AAFP Reporter* 6:1, 3, March 1979.
14. Feuer, Sylvia. "The Circuit Rider Librarian," *Bulletin of the Medical Library Association* 65:349-53, July 1977.

15. Holtum, Edwin A., et al. "Coordinators for Health Science Libraries in the Midwest Health Science Library Network," *Bulletin of the Medical Library Association* 65:224-30, April 1977.
16. "Proceedings, Sixty-fifth Annual Meeting, Medical Library Association, Inc., Boston, Massachusetts, June 6-9, 1966," *Bulletin of the Medical Library Association* 54:353, Oct. 1966.
17. "Proceedings, Seventy-third Annual Meeting, Medical Library Association, Inc., San Antonio, Texas, June 2-6, 1974," *Bulletin of the Medical Library Association* 63:83, Jan. 1975.
18. "CE Courses for Hawaii '79," *MLA News*, no. 109, p. 1, Dec. 1978.
19. "Continuing Education Courses," *MLA News*, no. 102, pp. 6-10, May 1978.
20. Based on information obtained from Karol Weigelt, MLA Division of Education.
21. Foster, Eloise C. "Library Development and the Joint Commission on Accreditation of Hospitals Standards," *Bulletin of the Medical Library Association* 67:228, April 1979.
22. "Continuing Education Courses," op. cit.
23. Chen, Ching-Chih. "A Citation Analysis of the *Bulletin of the Medical Library Association*," *Bulletin of the Medical Library Association* 65:291, April 1977.
24. Holtz, Virginia, and Olson, Paul. "Planning for Meaningful Changes in Libraries and Library Networks: A First Step," *Bulletin of the Medical Library Association* 64:376-81, Oct. 1976.
25. Department of Health, Education and Welfare, op. cit.
26. Corning, Mary E. "International Activities." In *National Library of Medicine Programs and Services Fiscal Year 1978* (DHEW No. NIH 79-256). Bethesda, Md., U.S. DHEW, p. 53.
27. Bernstein, Lionel M. "Lister Hill National Center for Biomedical Communications." In *ibid.*, pp. 39-42.
28. *Ibid.*, pp. 43-44.
29. Based on information obtained from Bruce Ardis, Chairman of the Health Sciences Audiovisual Section, 1978-79.
30. Marshall and Hamilton, op. cit.
31. Harris, Cheryl L. "Hospital-based Patient Education Programs and the Role of the Hospital Librarian," *Bulletin of the Medical Library Association* 66: 215, April 1978.
32. Lancaster, F. Wilfrid. "Whither Libraries? or, Wither Libraries," *College & Research Libraries* 39:345-57, Sept. 1978.